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ABSTRACT

The purpose of this study was to identify child characteristics associated with varying rates of oral participation in classrooms. The study also attempted to determine why some children seek social approval through an approach strategy while others use an avoidance strategy. Anxiety, defensiveness, self-concept of school ability, sociometric status, and position of the child's desk in the classroom were expected to be influential factors. Also examined was the child's perception of his/her role in the classroom and relationship to authority figures. The subjects were 48 third and fifth grade students in a suburban shcool. Behaviors observed and measured were handraises, answers to teacher questions, and personal requests for teacher attention. Several correlations were discovered. One was that anxious children were more involved in the classroom, presumably because they cared more about teacher-designed achievement activities. Also, girls' participation depended heavily both on their feeling they would not be criticized by their peers if they participated and on the degree to which they felt teacher encouragement of such participation. Low achievers participated more if their desks were in active areas in the classroom. The research seemed to bear out the general belief that girls' achievement is linked to attempts to gain approval while boys' achievement are more tied to self-approval. On the basis of this research, teachers are advised to encourage peer approval in the classroom and emphasize the acceptability of student involvement. (CD)

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Correlates of Oral Participation in Classrooms

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Many recent studies using naturalistic observation methods in the classroom have focused on the interactions of teachers and individual children, rather than on more global aspects of teacher behavior or classroom climate. These studies have made it clear that the same classroom can provide very different experiences for the individual children within it. One important area in which children have been found to differ is in the number and sorts of contacts they have with their teachers (Brophy & Good, 1974). Interacting with the teacher, both during public discussion and as a part of individualized assistance with and evaluation of his work, is an expected part of the child's school day, and an important area of achievement behavior for the elementary school pupil.

Investigation of those students who avoid participation in class has indicated that personality variables, as well as membership in sex or achievement groups, are important correlates of this behavior. This study continues and extends this approach in the investigation of child participation in instructional interactions with his teacher. The purpose of this study was to identify child characteristics associated with varying rates of oral participation in classrooms, and thus to explain individual differences in the number and kind of instruction-related interactions children have with their teachers.

Background of the Research

Although a lower rate of oral participation seems to be a pervasive and important feature of the school experience of girls, the reason for this phenomenon remains largely uninvestigated.

Previous research has suggested that boys and girls differ in the mechanisms that lead them to either seek or avoid classroom participation (Crandall,

1969; Lahaderne and Jackson, 1970). Lahaderne and Jackson (1970) found withdrawal in the classroom (fewer self-initiated interactions, fewer instructional interactions, and more inattentiveness) to be associated in girls, but not in boys, with high scores on the Children's Social Desirability Questionnaire, a measure of degree of concern about what others think of oneself. By indicating that it was a personality factor that accounted for differences in seeking participation, at least in girls, these findings suggest that further investigation into personality differences is needed. Lahaderne and Jackson conclude that boys and girls in their sample seemed equally concerned about the good opinion of others, but the boys chose an approach strategy to secure this good opinion while the girls used an avoidance strategy. The present study extended this line of research by further investigating personality factors and attitudes suspected to be responsible for these choices of strategy.

Research into individual personality differences suggests several areas to which one might look for reasons individuals choose either an approach or an avoidance strategy and thus in amount of participation sought by different children. The present study selected several such areas for further investigation. Among the most promising predictors of avoidance of participation was anxiety. Anxiety has been consistently associated with reluctance to perform and withdrawal from participation in situations in which evaluation will take place (Hill, 1972). Hill, in his discussion of anxiety in evaluative situations hypothesizes that avoidance motivation would be strongest in high anxious children, since the motive to avoid criticism would be stronger than the motive to obtain praise. Therefore, high scores on the Test Anxiety Scale for Children were expected to be a major predictor of avoidance of classroom participation. Other child characteristics, also selected on the basis of evidence from previous research, were self-concept

of school ability, as measured by the Brookover Self-Concept of Ability Scale, sociometric status, and position of the child's desk in the classroom.

In addition to these personality and situational variables that might well explain individual differences in patterns of participation, there is another area which should play an important part in a child's decision about whether or not to participate, and that has so far escaped systematic investigation. This is the child's feelings and perceptions about what the situation is, regarding participation, in his classroom. Specifically, does his teacher welcome handraising and appeals for assistance, or does she discourage one or both of these behaviors? What would be the reaction of the child's classmates to different sorts of participation he might display?

Research that has been done into children's perceptions of authority figures indicates that there may be individual and group differences in such perceptions that play a part in the amount of participation children display. Most interesting, and most provocative of the findings on childrens perceptions are those that indicate sex differences. Research into children's perceptions of authority indicates that girls feel a more positive and personalized relationship with authority figures. They are more attached to personal figures in government, and feel them to be more nurturant (Hess and Torney, 1967). In studies dealing particularly with the teacher as an authority, Davidson and Lang (1960) found that in late elementary school girls feel the teachers to have more favorable opinions of them than do boys. The perception of a more friendly relationship with authority figures is consistent with the finding (Formanek and Woog, 1971) that among pre-school children, boys perceive the teacher to be more threatening than do girls.

Freedman and Suter (1969) report a sex difference in answers of elementary school children to the question "How do you feel when the teacher asks you a question and you don't know the answer?", with girls more often reporting

negative feelings. Girls thus perceive themselves to have a more personalized relationship with authority and a feeling that authority figures like and care about them just as they like and care for authority figures. The girl would thus be likely to be more affected by the teacher's feedback, since she sees the teacher as taking every behavior of hers quite seriously, and any feedback as an indication of how this important relationship is faring.

The teacher is not the only audience of the child's classroom participation, however. The child's classmates form another important group. Sociometric measures do not, however, indicate the child's perceptions of his peers' acceptance of him, and especially his perceptions of their reactions to his classroom behavior. As Brophy and Good (1974) note in their thorough review of literature on classroom interaction, little is known about how peer expectations are formed, communicated, and changed in classrooms.

Methods

Data Collection

Since the concerns of this study did not dictate a sample of a particular ethnic or social class background, the school system in which the observations were done was selected for its convenience and accessibility to the observer. It is a fine, rather traditional suburban system in a middle class community.

Forty-eight children participated in this study, 24 third graders and 24 fifth graders. Since the observational instrument could reliably record the behaviors of 8 children in a classroom at one time, and a range of classrooms was desired, eight children, one-half boys and one-half girls, were selected from each classroom. Two of these boys and two of these girls were high achievers; the remaining children were from the low achieving group.

Achievement levels were determined on the basis of grade equivalent scores for the total battery of the Comprehensive Test of Basic Skills, that had been administered to the class earlier in the year. The selection was made by ranking the boys and girls separately on the basis of scores, eliminating the middle third of each group, and randomly selecting the required number of children from within the top and bottom third of these distributions.

The two major sources of data for the present study were the observational procedures assessing child participation, and paper and pencil measures that gave the scores on most of the predictors. The collection of observational data took place over a period of nine weeks in the spring. Each classroom was visited 8 times, covering either morning or the entire afternoon, with a distribution of morning and afternoon observations for each class. Observations were taken during public discussion periods, seatwork and periods during which the teacher was involved with a small group, but were suspended during periods when the teacher was out of the classroom and thus unavailable for contact. Each classroom was observed for between 10.4 and 13.5 hours; mean number of hours of observation was 11.0. Each child was observed, for at least 8 hours, and the mean number of hours of observation for each pupil was 9.8. Mean seatwork observation time was 5.89 hours, and mean discussion time observed per pupil was 3.96 hours.

Two observers gathered the information on participation behaviors in class. When an initiation of interaction, such as a handraise, was observed involving one of the sample children, it was appropriately noted with the child's identification number on a coding sheet. Percentage of observer agreement on number of contacts that took place ranged, for the four reliability checks, from 88.7% to 95%. Agreement on the number of contacts both seen and identically coded was somewhat lower, ranging from 77.2% to 93.6%.

After all observational data had been gathered, the paper and pencil tests were administered to the children. The total class answered the sociometric question,

and then the sample children from that classroom were taken to another location to answer the paper and pencil questions.

Variables and Analysis of Data

Behaviors recorded were those by which the child sought an opportunity to respond to a teacher's question or make a contribution to a public class discussion and those by which the child initiated a private conversation with the teacher. Four behaviors were assessed: number of handraises, number of called out responses to questions, number of private conversations with the teacher that the child initiated during seatwork (usually a request for assistance or approval), and number of private conversations the child initiated with the teacher during discussion (which involved disruption of class activities). Since these behaviors carry different risks and rewards, it would be expected that they would be predicted by different measures. It would also be expected that for different groups-boys and girls, high and low achievers, predictors would differ according to the most salient encouragers or discouragers of classroom participation for each group.

Child characteristics that were investigated as predictors of participation were chosen largely on the basis of the research just cited that suggested they would be related to avoiding or seeking classroom participation. These variables are: anxiety, as measured by the Test Anxiety Scale for Children; non-defensiveness, as measured by the Defensiveness Scale for Children (DSC); self-concept of school ability, as measured by the Brookover Self-Concept of Ability Scale; sociometric status; position of the child's desk in the classroom; and the child's perceptions of his teacher's and classmates' encouragement of the reactions to attempts at participation and his projected feelings in different participation situations, as measured by a scale devised for this study, Classroom Questions.

Factor analysis was done on the children's responses to the 39 questions in Classroom Questions, and the following 5 subscales were constructed using this information: (see following page CQ1 through CQ5)

CQ 1 - Other kids won't criticize me includes questions that deal with the child's perception that classmates won't be critical if the child participates. A sample question asks "If your teacher called on you in class and you didn't know the answer, the other kids would probably" with the alternatives "think you were smart", "think you were dumb", and "not think anything of it".

CQ 2 - Teacher wants to help me and hear from me includes questions that deal with the child's perception that the teacher encourages instrumental dependence and is interested in the child's contribution. A sample question is "If you're having trouble with your work, does your teacher want you to come up and ask her to help you?" with the alternative answers of "yes" and "no".

CQ 3 - Teacher won't criticise me includes questions that deal with the child's perception that the teacher won't be critical if the child participates. A sample question is "If you turned in a paper that was just a little messy, the teacher would probably" with the alternatives "think you were a good student", "think you were a poor student", and "not think anything of it".

CQ 4 - I'd feel bad if criticized by teacher includes questions that deal with the child's expectation that he will feel unhappy if the teacher criticizes him. A sample question is "If I went up to ask the teacher something, and she was busy and asked me to sit down, I'd feel", with the response alternatives "very good", "good", "wouldn't care", "bad", and "very bad."

CQ 5 - I prefer to take a chance and answer includes questions that deal with the child's preference for taking the risk of answering a question wrong in public class discussion. A sample question is the item stem "would you rather?" and the alternative responses "answer a lot of questions in class, even though you might get some wrong", and "answer only a few questions, but get every one right".

Since analysis of variance revealed grade and classroom differences on behavioral and predictor variables, all scores were converted into standard scores in classroom for further analysis. Prediction of behaviors by predictors was assessed by regression analysis.

Results

As Table 1 indicates, there were no significant sex differences in participation behaviors exhibited. When children were divided by achievement groups, the high achievers had, as expected, significantly more handraises than did low achievers.

Differences between groups were found in the predictors. As Table 2 indicates, girls reported more anxiety than boys (girls' mean = 15.54, s.d. = 7.348; boys' mean = 9.833, s.d. = 7.749) and low achievers reported more anxiety than high achievers (lows' mean = 15.416, s.d. = 8.72; highs' mean = 9.958, s.d. = 6.279) on the Test Anxiety Scale for Children. Low achieving girls had marked higher TASC scores.

On the Brookover Self-Concept of Ability Scale, the high achievers in this sample display the expected higher scores than low achievers, but girls do not have higher scores than boys. Group differences on the Classroom Questions scales are especially important, since the validity of these scales, which were devised for this study, has not been previously established. The differences that appeared between groups were few, and so provide little information. On CQ 4, "I'd feel bad if criticized by teacher", the higher scores of girls and of low achievers tends to substantiate the acale's assessment of the area it was designed to measure.

The findings on prediction of behaviors are given on Table 3. They indicate that anxiety, as measured by the Test Anxiety Scale for Children, emerged as a positive, rather than a negative predictor of participation. This was true for both of the most important behaviors, handraises and child initiations of private seatwork conversations. This reversal of the expected prediction was apparently due to the inclusion of children with middle range anxiety scores. Other studies, which had indicated that highly anxious children avoid participation in evaluative situations examined only the behaviors of children who were quite high or quite low on measures of anxiety. This study predicted the behaviors by means of regression analysis, and so included all children and a wide range of scores on the TASC. When

one includes such a range of children, rather than only those children with extreme scores, higher anxiety apparently indicates an emotional involvement in and a concern with the teacher-designed achievement activities of the classroom, and so is related to a greater amount of participation in that classroom in ways that teachers sanction. It therefore predicted both handraises and number of child initiations of private seatwork conversations. Previous research has found a similar curvilinear relationship between anxiety scores and achievement (Sharma, 1970), and the curvilinear relationship between anxiety and participation may illuminate the mechanisms that operate in this relationship.

The number of seatwork private conversations the children sought was predicted positively for the total sample by Classroom Questions Subscale 2, "Teacher wants to help me and hear from me", indicating the teacher's encouragement of instrumental dependence may be a factor in children's displaying such dependence.

A striking predictive finding in the present study is the presence of strong sex differences in the prediction of classroom behavior. The seeking of public response opportunities by both handraises and callouts of girls were predicted quite well for this sample by these measures. The most important predictor was high scores on CQ 1, "Other kids won't criticize me", which indicates that girls who expected their classmates to be critical of their participation attempts did not seek to participate as often as those who did not expect peer criticism. Additional important predictors of number of handraises of girls were high TASC scores, which indicates the importance of girls' perceptions of the teacher's encouragement of their participation.

Child initiated private seatwork conversations sought by girls were predicted by higher scores on CQ 2, "Teacher wants to help me and hear from me", which indicates the importance of the teacher's encouragement of instrumental dependence to the girl who seeks to participate in this way. These findings demonstrate the classroom relevance of the social concerns of girls, when expressed in terms of expectations

of criticism. They also demonstrate the fact that girls' perceptions of the attitudes of the teacher are important to their participation in situations in which teachers are the relevant audience.

In contrast to girls, the seeking of public response opportunities of boys were not well predicted by these measures. However the number of callouts were predicted by sociometric status. Another behavior requiring assertiveness, the initiation of mid-discussion private conversations was also predicted by sociometric status for boys, which is in keeping with the cultural stereotype that assertiveness is an admired quality for boys. It is also consistent with the findings of Edelman (1973) that sociometric status ranking is a much more important factor in the life of boys than of girls, whose social groupings tend to be more a diffuse web rather than a single heirarchy. However, the findings for boys and girls indicate the importance of the peer group, expressed differently for each sex, to the classroom behavior of children.

Achievement group differences in prediction were also found. Among high achievers, number of handraises were predicted by high TASC scores, indicating involvement in the achievement oriented activities of the classroom, and by high scores on C03 and C01, indicating that these children expected neither the teacher nor the other children to criticize them. The seatwork private conversation initiations of high achievers were best predicted by high sociometric status. The findings indicate that personality characteristics, perceptions of the classroom situation, and sociometric status are important to the participation of high achievers.

For low achievers, number of handraises were predicted by position of desk in class, indicating whether or not the child was seated in the high action zone. This is consistent with the research of Daum (1972) which indicated that position of the desk in class is more important to the enhancement of achievement of low achievers. This finding indicates the importance of environmental coercions in encouraging low

achieving children to participate, and suggests that low achievers will benefit from being placed in the high action zone. Seatwork private conversations initiated by low achievers were predicted by high scores on CQ 2, "Teacher wants to help me and hear from me", and low scores on sociometric status. Low achievers who sought the private conversations during seatwork that all of them probably need were those who saw the teacher as encouraging participation, and who were not highly chosen by their classmates. Perhaps they substituted interactions with the accepting teacher for interactions with nonaccepting peers.

The findings indicate that different sorts of participation in class are predicted by different measures. They also indicate that different groups of children are motivated in different ways to participate or not to participate. This indicates the individual measures tap personality features of different salience to each group's decision about how and how much to participate. Strongest predictors over all were, for discussion behaviors, CQ 1, "Other kids won't criticize me", the Test Anxiety Scale for Children, and sociometric status, all in a positive direction It appears that the Brookover Self-Concept of Ability Scale was the least effective measure used in predicting these behaviors.

Discussion

Two major issues raised by this study are the reasons for individual children's perceptions of the likelihood that participation will bring criticism from classmates, and the reason why these perceptions are relevant to the school behavior of girls and not boys. The present study provides no answer to the first issue. In response to the second issue, some explanation of this sex difference in prediction comes from the plentiful indications that the reactions of other people are the most important aspects of an achievement situation for girls, and that the achievement efforts of girls are more often directed toward obtaining affection and approval from others, while boys are more interested in self-approval upon successful task accomplishment (Crandall 1969). If, as Crandall suggests, girls use achievement to

obtain affection, it is not surprising that their expectations of criticism negatively predicts handraising, an achievement behavior, so well. If girls participate in order to gain positive feedback from others, a girl who expects criticism as a result of her efforts would not be likely to seek to participate at all.

A major methodological problem of the present study was the diversity of classrooms and settings observed. Although this permitted children to be matched on sex and achievement characteristics, and allowed an investigation of prediction of participation in a number of settings, it is entirely possible that setting did influence the prediction of participation. In addition, the conclusions that can be drawn from the present study are limited by the fact that the data were collected at one time point, rather than longitudinally. Thus, although the central question that was asked was one of causality, the methodology used was essentially correlational. Further study is required in order to determine both the direction of causality of the relationships that have been found and the course of development of both personality factors and behavioral strategies of children in schools.

Many questions about the nature of the classroom peer culture are raised by this study. There is a clear need for research that would clarify the way children's expectations of their own and others' classroom behavior are formed and ways they can be modified and changed by teacher practices. A first step in this direction might be the descriptive systematic study of the nature of classroom peer processes.

Several findings of the present study have implications for practice. The fact that wide disparity in amount of participation was found between grades and classes suggests that there is no optimal level of participation in all classrooms, but that different teachers and different pupils set comfortable levels for themselves and their subject matter. This study found that the frequency with which children initiate seatwork private conversations with their teacher was predicted by the child's perception of the amount of encouragement the teacher gives for this sort of behavior. Group differences in this predictor as well as correlations between predictors suggest that children's perceptions of teachers' encouragement

to participate is based on the child's having received such encouragement. Therefore, since it is important that children who need the individualized assistance that these conversations provide feel free to initiate them, teachers might well consider how to convey to children their readiness to assist with real problems.

Another finding with practical implication for teachers is the importance of being seated in the high action zone to low achievers. Since seating position does not seem to influence the behavior of high achieveing children, it must be recommended that teachers assign seats in the high action zone to their low achievers.

The fact that expectancy of rejection, which is similar to some of the measures used in this study, seems to be playing a part in the tendency of some children to avoid participation suggests further ways information from this study might assist classroom teachers in operating more effectively. Those who have conducted research in this area (Allaman, Joyce, and Crandall 1972) speculate that the reinforcement experiences of children in different areas may influence their expectancy of success in these areas and thus modify their avoidance tendencies in these areas. This suggests an opportunity for teachers to modify the amount of negative feedback they give students and thus modify their students' expectancies of failure and rejection, and therefore their tendencies to avoid participation.

The major finding of this study, which is that it is the peer classroom culture that is most important to the child's seeking or avoidance of participation in public discussion, suggests that teachers should be especially concerned about the sorts of peer group pressures they encourage. This study has demonstrated that the important approving agent may be different in different classroom situations, and for different children. It has also demonstrated that whether or not success is expected may not be as important, especially for girls, as the nature of the social reinforcement that is expected to follow. Social concerns of children have been shown to be quite relevent to their classroom behavior. This information may help teachers to plan classroom activities, create classroom climates, and themselves react in ways that will facilitate the participation of all their pupils.

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Footnote

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TABLE 1: BEHAVIORS OF CHILDREN AND TEACHERS: SUMMARY OF SIGNIFICANT DIFFERENCES BETWEEN GROUP MEANS

If there was a significant difference ($p \leq .05$), the group with the higher mean is given.

BEHAVIORS:	Grade	Sex	Achieve-ment	Sex X Achieve	Sex, Grade 3	Sex, Grade 5	Achieve Grade 3	Achieve Grade 5
CHILD VARIABLES: Public disc. contacts number handraises c1	fifth		high					
number callouts c2								
# handraises and call-outs accomplished c3								
Seatwork private conversations c4 number child initiates	third							
number accomplished c5	third							
Answer Quality c6 % answers opinions	third				boys			
%child sought, answered wrong c7								
% Teacher initiates, answered wrong c8								
Mid-disc. private conversations c9 number child initiates								
% of all sought in c10 disc. that were priv.								
Seatwork/discussion ratio ratio, seatwork/ c11 discussion	third							
TEACHER VARIABLES Public disc. init. by teacher #t callons, no t1 handraise								
Seatwork private conversation init. by T. #T initiates t2	third	boys						
Mid-disc private conv. init. by T. #T initiates t3								
Percentages of initiations made by T. % T init., disc. t4			lows					
% T. init., stwk. t5		boys						

TABLE 2: PREDICTORS: SUMMARY OF SIGNIFICANT DIFFERENCES BETWEEN GROUP MEANS

If a significant difference was demonstrated ($p \leq .05$) the group with the higher mean is indicated.

PREDICTORS:	Grade	Sex	Achievement	Sex X Achieve	Sex, Grade 3	Sex, Grade 5	Achieve, Grade 3	Achieve Grade 5
Test Anxiety Scale for Children (high is anxious)		girls	low	low girls		girls	low	low
Defensiveness Scale for Children (high is non-defens.)		girls						
Brookover Self-Concept of Ability Scale (high is high s.c.)			high					high
Sociometric Status (high is high status)				high girls				
Position of desk (high is high action zone)								
Classroom Questions: 1. Other kids won't criticize me.	fifth							
2. Teacher wants to help me and hear from me.	fifth							
3. Teacher won't criticize me.	fifth							
4. I'd feel bad if criticized by teacher		girls	low			girls	low	low
5. I prefer to take a chance and answer.							low	high

TABLE 3 SUMMARY OF FINDINGS ON PREDICTION - page 1

SAMPLE:	Public discussion contacts C1 hndraises	C2 callouts	C3 h.r.&Co accomp.	seatwork private conversations C4 child initiates	C5 #accomplished	answer quality C6 %opinion	C7 %C.init wrong	C8 % T.init wrng	mid-disc. priv. C9 #init	C10 % dis init. p
Total:	TASC* CQ1 -CQ4		CQ1*	CQ2 TASC		DSC* -CQ5	TASC* -DSC	Soc*	Soc*	Soc*
P for analysis=	.003	n.s.	.002	.020	n.s.	.035	.041	.038	.003	.014
GIRLS	CQ1** TASC CQ2	CQ1**	CQ1** TASC** -CQ5	CQ2			TASC** CQ1** -DSC* CQ2	soc** -pos** -Brook* CQ4	CQ3*	CQ3 -TASC DSC
P for analysis=	under.001	.022	Under .001	.034	n.s.	n.s.	under.001	.007	.008	.017
BOYS		soc				DSC* Brook -TASC -CQ5	TASC* -CQ1* -DSC		soc	soc*
P for analysis=	n.s.	.033	n.s.	n.s.	n.s.	.014	.031	n.s.	.032	.008
THIRD GRADE	CQ1	-Pos* CQ3 -Brook	CQ1*	Soc CQ2	CQ2	CQ3* DSC* -Brook			Soc	Soc
P for analysis=	.046	.015	.006	.017	.022	.003	n.s.	n.s.	.027	.007
FIFTH GRADE	Pos* CQ2*	Brook* CQ5 DSC	Pos** CQ2* DSC* -CQ5 -CQ4	TASC*	-Soc*	Brook -CQ1	Pos Soc		-	
P for analysis=	.007	.007	.003	.003	.049	.05	.014	n.s.	.042	n.s.
HIGH ACHIEVERS	TASC** CQ5* CQ3 CQ1		CQ1 TASC CQ3	Soc			TASC** -DSC			
P for analysis=	.016	n.s.	.009	.028	n.s.	n.s.	.017	n.s.	n.s.	n.s.
LOW ACHIEVERS	Pos	CQ2** -TASC CQ1	CQ2 Pos	CQ2** -Soc	DSC	-CQ5** -Soc* Pos	-	Soc	Soc** DSC	Soc* DSC*
P for analysis=	.036	.002	.002	.008	.019	.007	.044	.019	.002	.019

**p≤.001
*p≤.01

TABLE 3 SUMMARY OF FINDINGS ON PREDICTION - page 2

SAMPLE:	CHILD VARIABLES, cont'd.	TEACHER VARIABLES				
	C11 seatwork/discussion ratio	t1 pub.disc T. init	t2 seatwork private conversation T. init.	t3 #mid-disc priv T.in.	t4 % T. init. disc.	t5 % T. init. seatwork
TOTAL	-CQ1	CQ1*		-Pos CQ1	-CQ2	-TASC* -Soc*
P for analysis=	.021	.020	n.s.	.026	.012	.018
GIRLS	-CQ5* -TASC* CQ4	CQ1*				-TASC** -CQ3*
P for analysis=	.002	.021	n.s.	n.s.	n.s.	.001
BOYS	-Brook	-CQ2* TASC Soc		-pos -soc	-soc -CQ2	
P for analysis=	.022	.009	n.s.	.037	.004	n.s.
THIRD GRADE		-CQ2* -DSC CQ5 -CQ4		Brook	-CQ2	-Soc
P for analysis=	n.s.	.003	n.s.	.035	.030	.026
FIFTH GRADE	-Soc* CQ4* -Pos		-Soc* DSC* -TASC CQ1	-Pos* -Soc	-Brook*	-TASC* Pos DSC -CQ5 -CQ3
P for analysis=	.003	n.s.	.011	.012	.044	.039
HIGH ACHIEVERS	-CQ5** -TASC** -CQ1** Pos* -CQ3*	TASC CQ3 -DSC				-Soc**
P for analysis=	under .001	.035	n.s.	n.s.	n.s.	.003
LOW ACHIEVERS	-Brook -Pos	CQ1* -CQ2	CQ2 -TASC -Soc	Soc** DSC	-Soc* -DSC	-TASC*
P for analysis=	.011	.023	.047	.002	.040	.013

to